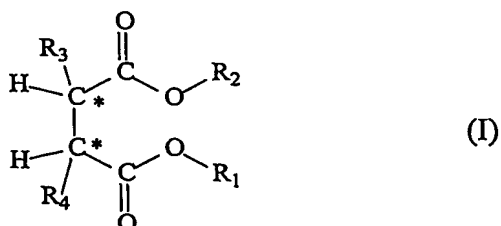


Claims

1. Propylene polymers having the following features:
 - 1) a content of isotactic pentads (mmmm), measured by NMR, higher than 97%,
 - 2) a molecular weight distribution, expressed by $\overline{M}_w/\overline{M}_n$ ratio, equal to or higher than 6; and
 - 3) a value of $\overline{M}_z/\overline{M}_w$ ratio equal to or lower than 5.5.
2. The polymers of claim 1 being propylene homopolymers.
3. The polymers of claim 1 having a stereoblock content up to 98° C of 10% or lower measured by the TREF method.
4. The polymers of claims 1 and 2 having a content of isotactic pentads higher than 97.5%.
5. The polymers of claims 1 to 3 having molecular weight distribution from 6 to 11.
6. The polymers of claims 1 to 4 having a value of $\overline{M}_z/\overline{M}_w$ equal to or lower than 5.
7. The polymers of claims 1 to 5 having melting temperature of 164° C or higher.
8. A process for preparing the polymers of claim 1 comprising only one polymerisation stage conducted in the presence of a Ziegler -Natta catalyst comprising:
 - a solid catalyst component comprising Mg, Ti, halogen and at least two electron donor compounds, said catalyst component being characterised by the fact that at least one of the electron donor compounds, which is present in an amount from 15 to 50% by mol with respect to the total amount of donors, is selected from esters of succinic acids which are not extractable, under the conditions described below, for more than 20% by mol (non-extractable succinates) and at least another electron donor compound which is extractable, under the same conditions, for more than 30% by mol (extractable electron donor compounds);
 - an organo-metal compound;
 - a highly stereoregulating electron donor compound (outside donor).
9. The process of claim 8 wherein the esters of succinic acids are selected from the succinates of formula (I) below



in which the radicals R_1 and R_2 , equal to, or different from, each other are a C_1 - C_{20} linear or branched alkyl, alkenyl, cycloalkyl, aryl, arylalkyl or alkylaryl group, optionally containing heteroatoms; and the radicals R_3 and R_4 equal to, or different from, each other, are C_1 - C_{20} alkyl, cycloalkyl, aryl, arylalkyl or alkylaryl group, optionally containing heteroatoms with the proviso that at least one of them is a branched alkyl; said compounds being, with respect to the two asymmetric carbon atoms identified in the structure of formula (I), stereoisomers of the type (S,R) or (R,S) that are present in pure forms or in mixtures.

10. The process of claims 8 and 9 the extractable electron-donor compound in the solid catalyst component is selected from esters of aromatic carboxylic acids.
11. The process of claims 8 to 10 wherein the outside electron-donor compound is selected from of silanes of formula $R_a^5 R_b^6 Si(OR^7)_c$, where a and b are integers from 0 to 2, c is an integer from 1 to 4 and the sum (a+b+c) is 4; R^5 , R^6 and R^7 are alkyl, alkylen, cycloalkyl or aryl radicals with 1 to 18 carbon atoms, optionally containing heteroatoms.
12. Films or sheets comprising the polymer of claims 1 to 7.
13. Films or sheets comprising a composition comprising the polymer of claims 1 to 7 and a hard resin.
14. Multilayer laminated articles comprising the film or sheet of claims 12 or 13.